

ABSTRACT OF THE DISCLOSURE

A rotary engine is provided that comprises a compression cylinder and combustion cylinder divided by a separation wall. Air or a fuel/air mixture is drawn into the compression cylinder, compressed, and then transferred to the combustion cylinder. The compressed air or air/fuel mixture is ignited in the combustion cylinder, creating an expansion of the combustion gases which drives the system. The compression and combustion cylinders have epicycloidal-shaped chambers that each house a single vane. The vanes pass through the crankshaft and adjust to remain in contact with the chamber walls as the crankshaft rotates. The compression ratio of the present invention can be maximized by adjusting the thicknesses of the compression and combustion cylinders as well as by offsetting the positions of the compression and combustion vanes with respect to one another.